



UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,639	10/26/2001	Bin Li	020510-002000US	1095
20350	7590	10/31/2005		
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			EXAMINER RIZK, SAMIR WADIE	
			ART UNIT 2133	PAPER NUMBER.

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/046,639	LI ET AL.	
	Examiner	Art Unit	
	Sam Rizk	2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/26/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTIONS

- Claims 1-24 have been submitted for examination
- Claims 1-24 have been rejected

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by

Locke et al. US patent no. 6598188 B1 (Hereinafter Locke).

1. In regard to claim 1, Locke teaches;
 - An iterative method for determining parameters for a forward error correction scheme for improving the quality of a data transmission, said method comprising the steps of:
 - (a) establishing a relationship between said parameters and a coding gain;
(Note: the Abstract in Locke)
 - (b) initializing said coding gain to a minimum predetermined value;
(Note: col. 27, lines (38-40) and col. 28, lines (6-10) in Locke)
 - (c) determining, based on said relationship between said parameters and said coding gain, an intermediate set of

parameters for providing a preferred result for said coding gain;

(Note: Col.27, lines (60-66) in Locke)

(d) incrementing a value of said coding gain by a predetermined value and repeating said step (c) until said coding gain reaches a predefined maximum value, thereby determining a plurality of intermediate sets of parameters; and

(Note: col. 27, lines (38-41) in Locke)

(e) determining a preferred set of parameters from said plurality of intermediate sets of parameters, wherein said preferred set of parameters provides said forward error correction scheme with an optimal set of values for balancing a code length and an error rate of said data transmission.

(Note: Locke: col. 28, lines (33-38) in Locke).

2. In regard to claim 2, Locke teaches;

- A method as defined in claim 1, wherein said step (a) of establishing said relationship between said parameters and said coding gain comprises:

(a1) calculating said coding gain for a plurality of associated parameters; and

(a2) storing results of said step (a1) in a table.

(Note: col. 27, lines (8-15) in Locke)

3. In regard to claim 3, Locke teaches;

- A method as defined in claim 1, wherein said step (a) of establishing said relationship between said parameters and said coding gain comprises:

(a1) calculating said coding gain for a plurality of associated parameters; and

(a2) determining an equation that approximates all results from said step (a1).

(Note: col.4, last four lines in the bottom in Locke)

4. In regard to claim 4, Locke teaches;

- A method as defined in claim 1, wherein said step (c) of determining said intermediate set of parameters comprises:
 - calculating a maximum number of bytes per symbol B including said coding gain;
 - locating all parameters that satisfy said value of said coding gain; and
 - selecting, as said intermediate set of parameters, and using said maximum number of bytes per symbol B, a set of parameters that provides a best performance.

(Note: col. 28, lines (11-14) in Locke)

5. In regard to claim 5, Locke teaches;

Art Unit: 2133

- A method as defined in claim 4, wherein said best performance is defined by said set of parameters that yields a largest number of information bytes.

(Note: col. 28, line 59 in Locke)

6. Claim 6 is rejected for the same reasons as claim 4

7. Claim 7 is rejected for the same reasons as claim 5.

8. In regard to claim 8, Locke teaches;

- A method as defined in claim 7, wherein said largest number of information bytes is compared with a maximum number of bytes B_0 had said forward error correction scheme not been implemented, for determining whether to use said forward error correction scheme.

(Note: Fig. 3, box 3 in Locke).

9. In regard to claim 9, Locke teaches;

- A method as defined in claim 1, wherein said step (c) of determining said intermediate set of parameters is further based on external factors, wherein said external factors include delay and noise protection.

(Note: col. 27, lines (45-55) in Locke)

10. Claims 10 and 16, 20 and 21 are rejected for the same reasons as claim 1.

11. Claim 11 is rejected for the same reasons as claim 5.

12. Claims 12 and 17 are rejected for the same reasons as claim 4.

Art Unit: 2133

13. In Regard to claim 13, Locke teaches;

- A method as defined in claim 10, wherein said step (c) of determining said intermediate set of parameters comprises:
- calculating a maximum number of bytes per symbol B including said coding gain; and
- selectively skipping said step (d) when a value of said minimum number of bytes per symbols B is less than or equal to a previous value of said maximum number of bytes per symbol B.
- calculating a maximum number of bytes per symbol B including said coding gain;

(Note: Fig 3. in Locke).

14. Claims 14,18, 19, 23 and 24 are rejected for the same reasons as claim 13.

15. Claim 15 is rejected for the same reasons as claim 1.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Jones US patent no. 6310909 B1 teaches DSL Rate Adaptation.
- Chen US patent no. 5987061 teaches modem initialization process for line code and rate selection in DSL data communications.

Art Unit: 2133

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Rizk whose telephone number is (571) 272-8191. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronics Business Center (EBC) at 866-217-9197 (toll-free)

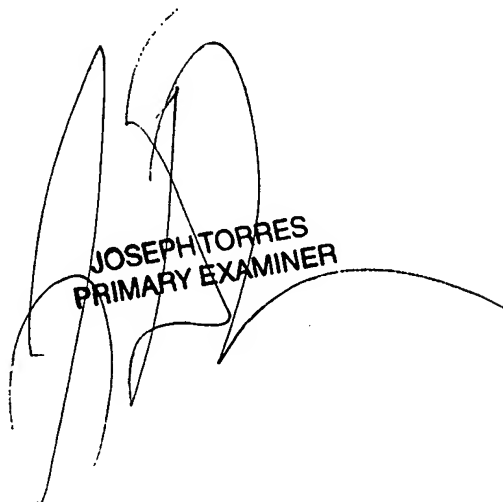
Sam Rizk, MSEE, ABD

Examiner

ART UNIT 2133



10/20/05



JOSEPH TORRES
PRIMARY EXAMINER